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PATENT APPLICATION

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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants: Timothy J. Barberich and James W. Young

Serial No: 07/461,262 Art Unit: 125

Filed: January 5, 1990 Examiner: L. Schenkman

Title: METHOD FOR TREATING ASTHMA USING  
OPTICALLY PURE R(-) ALBUTEROL

**CERTIFICATE OF MAILING**

I hereby certify that this correspondence is being  
deposited with the United States Postal Service as First  
Class Mail in an envelope addressed to Honorable  
Commissioner of Patents and Trademarks, Washington,  
D.C. 20231, on 12-30-90.

Hamilton, Brook, Smith & Reynolds

12-30-90  
Date

Susan D'Amato  
Signature

The Honorable Commissioner  
of Patents and Trademarks  
Washington, D.C. 20231

Sir:

Pursuant to 37 C.F.R. 1.56 and 1.97-1.99, the  
following listed items are cited to the Examiner as  
being information which, in the good faith judgment of  
the Applicants and the undersigned Attorney may be  
relevant to the subject matter claimed in the above-  
identified application.

As required by 37 C.F.R. 1.98, each item listed below is followed by a "concise explanation" of its possible relevance. The comments are merely an introduction intended to help the Examiner place each item in context. They are not represented or intended to be comprehensive summaries.

AR R.T. Brittain et al., Br. J. Pharmacol.,  
48:144-147 (1973)

Brittain and co-workers describe the pharmacological activity on  $\beta$ -adrenoreceptors of the optical isomers of salbutamol (a/k/a albuterol). They report that R(-) salbutamol was much more potent than S(+) salbutamol on  $\beta$ -adrenoreceptors.

AS C.J. Hawkins and G.T. Klease, J. Med. Chemistry,  
16(7):856-857 (1973)

Hawkins and Klease describe the potency of the (+) and (-) isomers of salbutamol (albuterol) on guinea pig tracheal tissue. They report that the (-) isomer was significantly more active than racemic salbutamol.

AT D. Hartley and D. Middlemiss, J. Med. Chemistry,  
14(9):895 (1971)

Hartley and Middlemiss describe the physical and chemical configuration of the optical isomers of salbutamol (albuterol). They report that R(-) salbutamol is much more active on  $\beta$ -adrenoreceptors than the S(+) isomer.

AU C.K. Buckner and P. Abel, J. Pharmacol. Exp. Ther., 189(3):616-625 (1974)

Buckner and Abel describe the effects of the optical isomers of soterenol, trimetoquinol and salbutamol (albuterol) on the  $\beta$ -adrenergic receptors of isolated guinea pig tracheal and atrial tissue in vitro. They report that the active isomer of salbutamol R(-) salbutamol, is much more active in tracheal tissue than in atrial tissue.

The references are listed on the attached PTO form 1449 and a copy of each is included for the Examiner's convenience.

Respectfully submitted,



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Dated: 12/20/90